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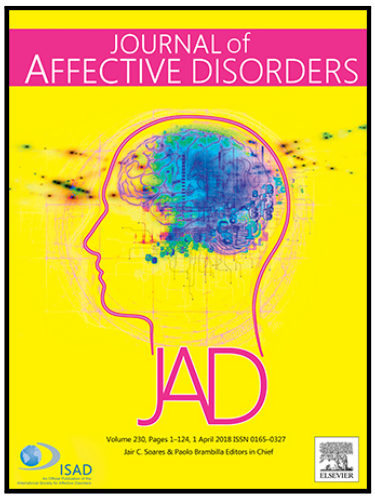

Personality traits, theory of mind and their relationship with multiple suicide attempts in a sample of first episode psychosis patients: one-year follow-up study

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HIGHLIGHTS

- Higher severity of symptoms during the first contact with mental health services by psychotic symptoms was associated with multiple suicide attempts.
- Significant relationship was found between failures in First-False Belief Task and a higher number of suicidal behaviour after first episode of psychosis.
- Multiple suicide attempters committed the first suicide attempt after first episode of psychosis earlier than single suicide attempters.

Personality traits, theory of mind and their relationship with multiple suicide attempts in a sample of first episode psychosis patients: one-year follow-up study

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ABSTRACT

Background: High rates of suicidal behaviour (SB) have been found in first episode psychosis (FEP) patients. It has been suggested that the presence of multiple suicide attempts (mSA) increases the risk of later SA and the risk of eventual death by suicide.

Objective: Our main objective was to study the baseline factors associated with the presence of mSA during the first year after FEP. In addition, a second aim was to find out whether there were any differences between single and multiple suicide attempters in the timing of the first SA after FEP.

Method: A total of 65 FEP patients were evaluated. The presence of SAs were recorded at two different times after FEP. Bivariate and multivariate analyses were performed to explore the relationship between SA with sociodemographic and clinical variables.

Results: Multiple linear regression showed that mSA was associated with the presence of increased symptom severity (B= 0.35; t= 3.67; p<0.01) and errors in first-order false-belief task (B= 0.48; t= 2.11; p= 0.04). There were significant differences in the timing of first SA after FEP between multiple and single suicide attempters.

Conclusions: Theory of mind impairments along with more severe symptoms during the first contact with mental health services for psychotic symptoms appeared to be important predictors of mSA. On the other hand, multiple suicide attempters tend to make a first SA after FEP earlier than single suicide attempters. These results could contribute to the implementation of preventive suicidal programs, however they must be confirmed by additional research.

1. Introduction

After first episode psychosis (FEP), patients are 12 times more likely to commit suicide than the general population (Dutta et al., 2010), and it is one of the leading causes of premature death in FEP patients (López-Moríñigo et al., 2014; Nordentoft et al., 2013). The highest risk period for suicidal behaviour in FEP patients is during the first year after presentation (Canal-Rivero et al., 2016; Dutta et al., 2011), although other studies have noted that the risk of a suicide attempt (SA) remains in more advanced stages of the disorder (Robinson et al., 2010).

The rates of multiple suicide attempts (mSA) in FEP patients are from 25% to over 50% (Fedyszyn et al., 2011; Robinson et al., 2010), and the presence of mSA has been reported to increase risk of successive SAs and even eventual death by suicide (Harris and Barraclough, 1997). It has further been suggested that those who have committed two or more SAs are four times more likely to be diagnosed with psychosis than single suicide attempters (Forman et al., 2004).

Although, few studies have analysed the characteristics of repetitive suicide attempters, some previous research has found that their first SA after FEP was committed earlier (Fedyszyn et al., 2011) than single attempters, and that a history of drinking alcohol by schizophrenic patients increased their likelihood of mSA by four (Robinson et al., 2010). In nonpsychotic patients, multiple suicide attempters present a severe clinical profile, poorer interpersonal functioning and high scores on impulsivity measures (Boisseau et al., 2013; Choi et al., 2013).

Single and multiple suicide attempters are considered as one group with similar characteristics. However, it has been suggested that those with a history of more than one SA could represent a separate subgroup (Forman et al., 2004). The main aim of this

study was to identify the most influential baseline factors associated with the presence of mSA, adjusting the analyses for a set of baseline sociodemographic and clinical variables associated with suicidal behaviour, such as personality traits, insight or social cognition. We hypothesized, in agreement with previous publications, that drinking more alcohol is related to the presence of a higher number of SA after FEP. A second aim of this research was to analyse the differences in the timing of the first SA after FEP between single suicide attempters and multiple suicide attempters. We thought that there would be more multiple suicide attempters among those participants whose first suicide attempt was made during the first six months after FEP.

2. Materials and methods

This study was carried out following the recommendations of the STrengthening the Reporting of OBservational studies in Epidemiology (STROBE) and meets the criteria included in all the sections mentioned in its checklist: i) Title and Abstract, ii) Introduction, iii) Methods, iv) Results, v) Discussion and vi) other information (Vandenbroucke et al., 2009; Von Elm et al., 2008).

2.1. Participants

Sixty-five patients hospitalized from 2003 to 2005 for a first episode of non-organic psychosis were recruited from the Acute Psychiatry Unit of San Cecilio University Hospital Public Mental Health Services Network (Granada, Spain). San Cecilio University Hospital is a general hospital in the metropolitan area of Granada. Inclusion criteria were: 1) aged 14-60-years; 2) at least one of the following symptoms: hallucinations, delusions, disorganized speech, catatonia or disorganized behaviour and negative symptoms, and 3) it was their first contact with mental health services for

psychotic symptoms. Exclusion criteria were: 1) previous diagnosis of neurological disease or 2) a history of head trauma with loss of consciousness for > 1 hour. All patients, with a first episode of a functional psychotic disorder were recruited for this study in the order received using a consecutive sampling technique. In addition, all patients were initially screened by MRV, an experienced psychiatrist, for the presence of psychotic symptoms and to clarify symptomatology, and were subsequently diagnosed using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) (First et al., 1997) with "affective (all manic episodes with psychotic symptoms) and non-affective" according to the DSM-IV (295-298 psychosis codes)". The first contact with the mental health service for FEP was confirmed with an interview with family and patients. If that information was unavailable, the Personal and Psychiatric History Schedule was used (WHO, 1996). This instrument contains a question about the date of the first contact with general and mental health practitioners for psychotic symptoms (WHO, 1996). Patients who met inclusion criteria and none of the exclusion criteria were invited to participate in the study. All the participants were informed and gave their written consent. The research protocol was approved by San Cecilio´s University Hospital Ethics Committees.

2.2. Baseline assessments

All baseline data were collected at first contact with the mental health services when participants had achieved some degree of stability, except for the Positive and Negative Syndrome Scale (PANSS), which was administered as soon as practicable. Sociodemographic variables, such as gender, age and education were recorded using a proforma designed for the study. Suicidal behaviour prior to the FEP was evaluated at

baseline, and the presence of suicidal behaviour was reassessed at six and twelve months from the first contact with the mental health system for psychotic symptoms.

2.2.1. Structured Clinical Interview for DSM-IV Axis I Disorders

The SCID-I was used to screen for psychotic symptoms and make diagnoses (First et al., 1997).

2.2.2. Duration of Untreated Psychosis

Duration of Untreated Psychosis (DUP) was defined as the period of time in days from the first psychotic symptom to the start of antipsychotic treatment. Onset of psychosis was defined as the presence of one of the following psychotic symptoms for one week or more: delusions, hallucinations, thought disorder, strong psychomotor disorder or bizarre, grossly inappropriate and/or disorganized behaviour with noticeable deterioration in function (Norman and Malla, 2001; Ruiz-Veguilla et al., 2012).

2.2.3. Global Assessment of Functioning

Global psychosocial functioning was measured by the Global Assessment of Functioning Scale (GAF) (Endicott et al., 1976). This scale, which ranges from 0 (inadequate information) to 100 (superior functioning), provides a global index of psychological, social and occupational functioning. It is a subjective measure based on a clinician's opinion of a patient's level of functioning and has been found to be a reliable and valid tool for assessing overall functioning (Jones et al., 1995). This scale was used at the first contact with the mental health service to measure global functioning during the previous month.

2.2.4. Positive and Negative Syndrome Scale

The Positive and Negative Syndrome Scale (PANSS) (Peralta and Cuesta, 1994) was used to evaluate positive and negative symptoms as well as general psychopathology. We used the five-factor model proposed by Wallwork: positive, negative, disorganized/concrete, excited and depressed (Wallwork et al., 2012).

2.2.5. Grams of alcohol per day were recorded

Alcohol use was evaluated with questions from the Systematic Interview of Alcohol Consumption (Gual et al., 2001) and grams of alcohol drunk per day during the 30 days before the first contact with mental health services for psychotic symptoms were recorded.

2.2.6. Theory of mind

Beliefs were evaluated based on Theory of Mind (ToM) using two false-belief tasks (FBT). The two stories were read individually to the participants to examine their ability to understand first and second-order false beliefs. First order false belief (F-FB) was evaluated using " The Cigarette Story" and second order false belief (S-FB) were tested using "The Burglar Story" (Frith and Corcoran, 1996). First order false belief tasks (F-FBT) require an inference about a false belief about the state of the world while second order false belief tasks (S-FBT) involve the ability to discriminate a false belief about what another believes (Stratta et al., 2007).

All participants were asked two questions. The first question is normally answered on the basis of the mental state of one of the characters (ToM question) and concerns that character's false belief about the situation. The second question (control question) reflects the subject's understanding of the stories. Scores of 1 indicate a wrong or incomplete answer and 0 is equivalent to a correct answer.

2.2.7. Insight

The Scale of Unawareness of Mental Disorder (SUMD) (Amador et al., 1994, 1993; Ruiz Ripoll et al., 2008) was used to evaluate insight. The first three items of the SUMD were used: 1) awareness of mental disorder 2) awareness of the effects of medication and 3) awareness of the social consequences of the disorder.

2.2.8. Prodromal depression

The full Schedules for Clinical Assessment in Neuropsychiatry (SCAN) (Vazquez-Barquero et al., 1994) enables the interviewer to accurately date symptoms and chart previous episodes of mental illness. The full interview was also used to rate prodromal depression. The presence of a depressive episode during the prodromal period was specifically rated for the six months leading up to the onset of psychosis using Sections 6, 7 and 8 of the SCAN. Patients were classified as having had prodromal depression or not based on this information.

2.2.9. Substances urine analysis

Urine toxicology screening, in particular, the enzyme-multiplied immunoassay technique (EMIT), a form of enzyme immunoassay analysis, was used to detect the presence of substances. The results of the screening were dichotomized as substance present or not present in the urine analysis.

2.2.10. Severity of symptoms

Patients' symptom severity during most of the time they were hospitalized was evaluated. Usual symptom severity was assessed using an amended version of the WHO Life Chart Schedule (WHO, 1992) rated on a Likert-type rating scale of 3=severe, 2= moderate, 1=mild and 0= recovered (van Os et al., 1999). It is a semi-structured

interview which uses clear definitions for all rating and was administered by a clinician with experience in schizophrenia (MRV). The information was collected from a patient interview as well from other available sources, including family, medical records and primary physicians. Scores were made on the basis of all information available taking into account four different domains: i) symptoms, ii) treatment, iii) residence and iv) work (Susser et al., 2000).

2.2.11. Personality Traits

Personality traits were analysed using the Personality Assessment Schedule (PAS) (Cuesta et al., 1999). This scale was modified to provide five personality clusters: schizoid, sociopathic, passive-dependent, anancastic and schizotypy using a standard formula. The items in the schizoid dimension were introspection, shyness, and aloofness. The sociopathic dimension included irritability, impulsivity, aggression, callousness, and irresponsibility, and passive-dependent included anxiety, vulnerability, childishness, lack of resources, and dependence. Items on the anancastic dimension were sensitivity, conscientiousness, rigidity, and hypochondria, and the schizotypy items were suspiciousness and eccentricity.

2.3. Follow-up assessment

2.3.1. Suicide attempts after FEP

SA was understood as a self-inflicted, potentially injurious behaviour with a non-fatal outcome for which there is evidence of intent to die (Silverman et al., 2007a). SAs were recorded using the SCAN (Wing et al., 1990), which includes a question about attempted suicide as follows: 'Have you thought about harming yourself or even attempted suicide during (period)? What happened?'. The question was answered by the

participants and key relatives of the study. The responses were classified in four categories: 0) Absent, 1) Deliberately considered suicide or self-injury (intrusive thoughts) but made no attempt, 2) Injured self or made an attempt, but without serious harm, 3) As 2 but with serious self-harm and 4) Made an attempt at suicide designed to result in death. SA was dichotomized as present/absent defined as scores of 2, 3 or 4. These SCAN questions capture the recommendations made by Silverman et al. (Silverman et al., 2007a, 2007b) insofar as they appear to be specific, selective and sensitive to clarifying what is meant by attempted suicide. The first question responds to what these authors call a Type I SA (no injury), while the third question perfectly captures what they call a Type 2 suicide attempt (injury) (Silverman et al., 2007a).

2.4. Statistical analyses

Statistical analyses were conducted using the Statistical Package for the Social Sciences (SPSS), ver. 23 (IBM Corp., 2016). The Kolmogorov–Smirnov test examined the normality of variable distribution. Nonnormally distributed variables were log-transformed. The DUP variable was normalized because it was skewed.

Multiple linear regression analyses (backward method) were performed to test the real influence of the independent variables, while considering interrelationships, with the presence of multiple suicide attempts. The significant variables in bivariate analysis formed the trait variables (predictors) in multiple linear regressions. All tests were two-tailed with $p \leq 0.05$.

The Mann-Whitney test was used to find out whether there were more multiple than single multiple suicide attempters among those who committed SA for first time during the six months following FEP.

3. Results

3.1. Sample characteristics

The sample was made up of 65 patients (21 women, 44 men) aged 14-54 (26.2±9.5), nine of whom were diagnosed with affective psychosis (all with manic psychotic symptoms at onset of psychotic disorder) (13.8%), while 56 were diagnosed with non-affective psychosis (86.2%). Full demographic and baseline clinical characteristics of the study sample are given in the Table 1. Twenty (30.8%) made SAs during the follow-up period. Nine of them (45%) committed a single suicide attempt, five (25%) attempted suicide twice, and the last six (30%) attempted suicide three times during the year of follow-up. None of the participants died by suicide during the follow-up period. Late-onset schizophrenia patients (those with schizophrenia onset between ages 40-60 years) differed significantly in negative symptomatology and civil status. None of the variables showed significant relationship with SB.

Although the presence of suicidal behaviour (SB) could be considered related to disability, in a previous study published by our group with the same sample, the presence of SB was observed to predict only personal care disability and not occupational, social, family or global functioning (Canal-Rivero et al., 2018).

3.2. Bivariate analyses

3.2.1. Number of suicide attempts

Severity of symptoms (r=0.43, p<0.01), schizoid (r=0.31, p=0.01) and sociopathic (r=0.26, p=0.03), correlated positively with the number of suicide attempts after FEP (Table 2). We found significant differences in the number of suicide attempts between patients with errors in F-FBT and those without errors in that task (0.83±1.11 vs. 0.33±0.79; U=310.00, p=0.04). Patients with errors in S-FBT also made more SA than those without (0.77±1.04 vs. 0.28±0.80; U=309.50, p=0.02) (Table 3).

3.3. Backward multiple linear regression model

3.3.1. Number of suicide attempts

The variables associated with the number of suicide attempts were severity of symptoms (B= 0.35; *t*= 3.67; p<0.01) and errors in F-FBT (B= 0.48; *t*= 2.11; p= 0.04), amounting to 25% of the variance in the number of suicide attempts. The Variance Inflation Factor (VIF) was calculated and none was over 1.18, so multicollinearity could be assumed.

3.4. Timing of first suicide attempt

A total of 20 participants attempted suicide during the follow-up period. Fourteen (70%) SAs occurred in the following six months after FEP. Five (35.71%) of the first suicide attempters during the first period assessed by the study were single suicide attempters while nine (64.29%) were multiple suicide attempters. Mann-Whitney results showed significant differences (*U*=23.00, p<0.01) between single and multiple suicide attempters in the timing of first SA during the first six months after FEP (Table 4).

4. Discussion

The results showed that the presence of more severe symptoms during the first contact with mental health services for psychotic symptoms was associated with mSA. However, drinking more alcohol did not predict the presence of a higher number of SAs after FEP. On the other hand, we did find a significant relationship between failures in F-FBT and a higher number of SA after FEP. The hypothesis formulated in the second aim of this study was confirmed, and furthermore, the results particularly indicated that multiple suicide attempters committed the first SA after FEP earlier than single suicide attempters.

Several studies have reported the importance of severity of symptoms as a suicide risk factor in the months following discharge (Bakst et al., 2010; Canal-Rivero et al., 2016; Pompili et al., 2011). Furthermore, previous studies that have analysed multiple suicide attempters in a non-psychotic population have also shown them to have a severe clinical profile (Choi et al., 2013; Forman et al., 2004). Those results coincide with ours, which found that the presence of more severe symptoms during the first contact with mental health services was related to the presence of repetitive SA in the months following FEP.

ToM impairments have been identified in FEP patients, and it has been suggested that ToM difficulties could represent a vulnerability marker in schizophrenia (Bora and Pantelis, 2013; Sprong et al., 2007). ToM handicaps have been related to suicidal behaviour in psychotic patients as well as in FEP patients (Canal-Rivero et al., 2017; Duñó et al., 2009). More recently, Depp et al. (2018) also pointed out the importance of social cognition as a predictor of suicide-related behaviours in schizophrenic patients (Depp et al., 2018). The presence of ToM failures could

contribute to poorer interpersonal functioning (Bora and Pantelis, 2013). In fact, interpersonal difficulties have been linked with repetitive SA (Forman et al., 2004). In FEP patients, interpersonal issues such as relationship problems, peer conflict or family discord have been suggested as the causes of almost 33% of SA, and social cognition failures could contribute to such social interaction problems (Fedyszyn et al., 2011). As pointed out by Stratta et al. (2011), lack of first-mentalizing abilities is related to worse psychosocial functioning (Stratta et al., 2011).

Characteristics such as fearfulness, social inhibition, aggression, shyness, pessimism, immaturity (Albayrak et al., 2012), as well as schizotypal (Teraishi et al., 2014), passive-dependent (Canal-Rivero et al., 2016) and schizoid (Canal-Rivero et al., 2017) personality traits have been associated with suicidal behaviour in psychotic patients. Schizoid characteristics have been strongly associated with factors such as isolation, loneliness and little social support which have also been related to suicidal behaviour in psychotic (Pompili et al., 2007) and non-psychotic patients (Joiner., 2012). Impulsivity and characteristics such as hostility or aggressiveness, which are included in the sociopathic dimension measured by the PAS, have also been related to suicidal behaviour in psychotic patients (Albayrak et al., 2012; Björkenstam et al., 2014) and to multiple suicide attempters in non-psychotic patients (Boisseau et al., 2013). Both personality traits in the bivariate analyses were significantly related to the presence of a higher number of SA, but these relationships did not remain significant in the multivariate analysis. This could be because both personality traits are strongly related to ToM failure, and both are included as predictors in the multivariate analyses in conjunction with errors in ToM. This significant relationship between such personality traits and ToM failures (Brüne, 2005) could be the reason the relationship between these

personality traits and suicidal behaviour disappeared in the multiple linear regression model.

Several other studies have reported that the first year after FEP was the period with the highest rates of suicidal behaviour (Dutta et al., 2010). Moreover, it has been suggested that the six months following the onset of the disorder is a sensitive suicidal period, with an important decrease in suicide rates after that (Fedyszyn et al., 2010). Fedyszyn et al. (2011), in a study carried out in a sample of early psychosis patients, showed that multiple suicide attempters made their first attempts significantly earlier than single suicide attempters (Fedyszyn et al., 2011). In keeping with this study, we hypothesized that there would be significant differences in the proportion of attempted suicides in the six months following onset between multiple suicide attempters and single suicide attempters. In fact, we did find that there was a higher proportion of multiple suicide attempters among those who had attempted suicide for the first time during the first six months, in agreement with Fedyszyn et al.

The results of the study show that it would be reasonable for multiple suicide attempters to have presented SB even before the onset of FEP. However, we did not find any significant differences in previous SB between SA and mSA (0.57±1.01 vs. 0.58±0.96; $U=431.50$, $p>0.05$). These results suggest that SB before and after FEP have different characteristics and influence future SB. Further studies with longer follow-up periods would therefore be of interest to find out how the presence of SB during the first year after FEP could affect later behaviour. It is possible that the period and the number of SAs after FEP configure different groups with particular characteristics.

This study did not find any significant relationship between SB and some of the classic suicide risk factors identified so far, such as substance misuse, depressive

symptomatology, DUP, insight, younger age or history of previous SB (Challis et al., 2013; Hawton et al., 2005). However, conflicting results have been reported on the relationship between SB and substance misuse (Robinson et al., 2010), DUP (Nordentoft et al., 2002), depressive symptomatology (Sanchez- Gistau et al., 2015; Upthegrove et al., 2010), insight (López-Moríñigo et al., 2012) and younger age at first contact (Ayesa-Arriola et al., 2015). Inconsistent findings with regard to SB history have also been published. In particular, Ayesa-Arriola et al. (2015) did not find any significant relationship between SB during the month before and two months after FEP with previous SB (Ayesa-Arriola et al., 2015). In keeping with this, Levi-Belz et al. (2017), in a follow-up study with a nonpsychotic population, also reported that history of SB did not predict future suicidal events (Levi-Belz et al., 2017).

4.2. Limitations

This study has some limitations, which should be taken into account when interpreting our result. Firstly, the sample size was relatively small, which may have resulted in limited statistical power, i.e., Type 2 errors. The fact that our sample may have lacked sufficient power did not allow to us test the influence of classical suicide risk factors such as depressive symptoms, history of previous SB or drug misuse. Secondly, neurocognitive measures and other untested variables in the study, which could be related to suicidal behaviour and were not evaluated in it, may have been the reason for the relatively small percentages of variance explained by each model. Third, the sample is formed by nonaffective and affective psychoses. This, and the relatively small size of the sample, recommend that the results of the study be taken with caution for both diagnostic groups. Finally, the predictors considered in the study were only

taken at baseline, not allowing any changes which were likely to have occurred over the 12-month follow-up period to be captured.

4.3. Conclusions

ToM failures were found to be the main predictor of mSA during the first year after FEP along with severity of symptoms during the first hospitalization for the presence of psychotic symptoms. In addition, the results showed that mSA tend to present first SB after FEP earlier than single suicide attempters and this fact could represent a risk factor for successive SA. In consideration of our findings, the inclusion of suicidal intervention programs which take social cognition into account, as well as specific intervention with more severe symptomatic patients, may be helpful in reducing SB during the first year after FEP. Further follow-up studies are required to analyse the possible benefits from specific intervention based on the findings of the present work. Finally, few studies have analysed this important issue and more studies are necessary to reach reliable conclusions.

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Author contributions

MCR: Study conception, design, analysis, drafting and manuscript revision. EVB: Manuscript revision. MLB: Data acquisition and manuscript revision. FVC: Manuscript revision. JEOL: Manuscript revision. BCF: Manuscript revision. MRV: Study conception, design, data acquisition, analysis, and manuscript revision. All authors have made substantial contributions and have approved of the final version of the manuscript.

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Conflict of interest

The authors declare that there are no conflicts of interest in relation to the subject of this study.

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	Total sample (n=65)
Age (years), mean ±SD	26.17± 9.53
Gender, n (%)	44 (67.7%)
Male	44 (67.7%)
Female	21 (32.3%)
Education (years), mean ±SD	8.34± 3.72
DUP in days, median (min-max)[a]	4 (0-548)
Diagnosis, n (%)	
Non-affective psychosis[b]	56 (86.2%)
Affective psychosis	9 (13.8%)
Previous suicide attempt, n (%)	19 (29.2%)
Suicide attempts after FEP, n (%)	20 (30.8%)
Prodromal depression, n (%)[c]	18 (35.29%)
PANSS, mean ±SD	
Negative factor	13.22± 7.55
Positive factor	13.37± 4.01
Disorganized factor	8.57± 3.94
Excitement factor	9.09± 4.54
Depression factor	7.42± 3.10
Severity of symptoms at onset, mean ±SD	0.85±1.13
SUMD, mean ±SD	
Unawareness of mental disorder	3.92± 1.37
Unawareness of effects of medication	3.83± 1.50
Unawareness of social consequences of the mental disorder	3.72± 1.48
PAS, mean ±SD	
Schizoid	1.58± 1.60
Sociopathic	1.72±1.28
Passive-dependent	1.34± 0.92
Anancastic	1.66± 1.46
Schizotypy	2.35± 1.89
Substances urine analyses, n (%)[d]	
Positive	21 (33.9%)
Grams of alcohol per day, mean ±SD[e]	9.94±15.87
ToM[f]	
F-FBT	
Errors, n (%)	23 (38.9%)
S-FBT	
Errors, n (%)	30 (50.8%)
GAF	42.40±15.91

SD: standard derivation; FEP: First Episode of Psychosis; DUP: Duration of Untreated Psychosis; PANSS: Positive and Negative Syndrome Scale; SUMD: Scale of Unawareness of Mental Disorder; PAS: Personality Assessment Schedule; PAS: Premorbid Adjustment Scale; ToM: Theory of Mind; F-FBT: First order False Belief Tasks; S-FBT: Second order False Belief Task; GAF: Global Assessment of Functioning.

[a] n= 56

[b] All with manic symptoms with affective psychosis

[c] n= 51

[d] n= 57

[e] n= 62

[f] n= 59

Table 1. Sociodemographic and clinical characteristics of total sample.

Table 2. Associations between continuous dependent and independent variables

	Number of suicide attempts after FEP	
	Statistics[a]	**p**
Age	0.01	0.97
Education	0.20	0.11
lnDUP	-0.06	0.68
PANSS		
Negative factor	0.04	0.73
Positive factor	-0.09	0.46
Disorganized factor	-0.03	0.82
Excitement factor	-0.15	0.22
Depression factor	0.07	0.56
Severity of symptoms	**0.43**	**<0.01***
SUMD		
Unawareness of mental disorder	0.17	0.18
Unawareness of effects of medication	0.06	0.61
Unawareness of social consequences of the mental disorder	0.06	0.63
PAS		
Schizoid	**0.31**	**0.01***
Sociopathic	**0.26**	**0.03***
Passive-dependent	0.14	0.25
Anancastic	0.12	0.36
Schizotypy	0.16	0.22
Grams of alcohol per day	0.01	0.95
GAF	0.01	0.97

lnDUP: Logarithmic transformation of Duration of Untreated Psychosis; PAS: Premorbid Adjustment Scale; PANSS: Positive and Negative Syndrome Scale; SUMD: Scale of Unawareness of Mental Disorder; PAS: Personality Assessment Schedule; PAS: Premorbid Adjustment Scale; GAF: Global Assessment of Functioning.

[a] Associations between continuous dependent and independent variables analysed with Spearman.

Table 3. Associations between continuous dependent variables and categorical independent variable

	Number of SA after FEP			
	Mean	**SD**	**Statistics[a]**	**p**
Gender				
Male	0.57	0.98	451.00	0.85
Female	0.57	1.00		
Diagnosis				
Affective-psychosis	1.00	1.32	202.00	0.24
Non-affective-psychosis	0.50	0.92		
Previous SA				
History of previous suicide attempts	0.58	0.96	431.50	0.92
No-history of previous suicide attempts	0.57	1.00		
Prodromal depression				
Presence of prodromal depression	0.33	0.77	288.00	0.81
No-presence of prodromal depression	0.42	0.87		
Substance urine analyses				
Positive	0.67	0.97		
Negative	0.47	0.91	335.50	0.39
ToM				
F-FBT				
Corrects	0.33	0.79	310.00	**0.04***
Errors	0.83	1.11		
S-FBT				
Corrects	0.28	0.80	309.50	**0.02***
Errors	0.77	1.04		

SD: standard derivation; ToM: Theory of Mind; FBT: False belief tasks; F-FBT: First order False Belief Tasks; S-FBT: Second order False Belief Task; SA: Suicide Attempts; FEP; First Episode of Psychosis.

[a] Differences in the number of suicide attempts after first episode of psychosis analysed with Mann-Withney U test.

Table 4. Timing first SA after FEP

	Single suicide attempters	**Multiple suicide attempters**	**Statistics**	**p**
First SA during the first 6 months after FEP, n (%)	5 (35.71%)	9 (64.29%)	23.00	<0.01

SA: Suicide Attempt; FEP: First Episode of Psychosis.